

REMARKS

The invention of independent claims 19-21 is a system for creating an augmented reality display coupled with a firefighter's self-contained breathing apparatus (SCBA) mask. The invention combines a head-mounted display, SCBA mask, and a head motion tracker coupled to the SCBA mask. The invention accomplishes a display suitable for performing exercises, such as training of firefighters or other emergency first responders, in augmented reality.

The examiner rejected the drawings as not showing the "stereoscopic view" of claim 5. The applicant has already amended the drawings and text in this regard in the response filed on August 6, 2003, and thus believes that the objection has already been met.

The examiner rejected all of claims 1-18 with the exception of claims 11, 12, 15, 16 and 18. The rejections are over a combination of Zhang in view of Webster. Some of the claims were rejected in further view of Arai et al.

The Zhang patent discloses a firefighter's SCBA with either an infrared or visual camera. The image from the camera is fed to an external source wirelessly, or shown back to the user using a partial mirror that the user can also look through.

Webster discloses a wide angle viewing system. Figure 13 discloses an embodiment with motion detectors coupled to the horizontal and vertical axes 114 and 116. Helmet 110 is attached to chair 112 by a frame that allows pivotal movement along axes 114 and 116.

There is no suggestion in either Zhang or Webster to take the motion tracker system of Webster and integrate it into the device of Zhang. The examiner has impermissibly used hindsight reconstruction to allege that one skilled in the art would do so to "provide a one-to-one correspondence between the head movement and the field of view perceived by the eye". Zhang

simply discloses displaying to the user a view taken by a camera attached to the user's helmet. This is done so that the user can view an infrared image captured by the camera. Since the camera is coupled to the helmet (and thus is fixed relative to the user's head and field of view), and since Zhang will not be displaying any computer-generated objects that correspond to real world objects (which would require tracking), Zhang has no use for tracking motion of the helmet. Indeed, such would be entirely superfluous because Zhang's camera is anchored to the helmet, and thus the camera field of view obviously is permanently mechanically coupled to the user's field of view. Thus, the Webster helmet position detection scheme is entirely unnecessary in Zhang, and there can thus be no question that there is no motivation in the Zhang reference to look to the motion detector system of Webster. The combination of references is thus clearly improper under the law of 35 U.S.C. § 103, and cannot be maintained.

The applicant has herein replaced claim 1 with new independent claims 19, 20 and 21. These claims define systems that are markedly different than original claim 1. As it is improper to combine Webster with Zhang, these new independent claims are clearly patentable over the references of record.

Accordingly, all of the claims are allowable. Early and favorable action is respectfully requested.

If for any reason this Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned in Westborough, Massachusetts at (508) 898-1818.

Very Truly Yours,



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CERTIFICATE OF EXPRESS MAILING

I hereby certify that the attached AMENDMENT, including a REQUEST FOR RCE, is being deposited with the United States Postal Service, via Express Mail No. EV232293164US, on this 24th day of February, 2004, in an envelope addressed to Mail Stop: RCE, Commissioner of Patents and Trademarks, P.O. Box 1450, Alexandria, VA 22313-1450.

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